

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 24 OCT 2005

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Applicant's or agent's file reference 031226PC/GC/RG	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/AU2004/001518</b>	International filing date (day/month/year) 3 November 2004	Priority date (day/month/year) 4 November 2003
International Patent Classification (IPC) or national classification and IPC Int. Cl. <sup>7</sup> F02M 27/04, F02B 51/04		
Applicant SAVE THE WORLD AIR, INC. et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2. This REPORT consists of a total of 3 sheets, including this cover sheet.	
3. This report is also accompanied by ANNEXES, comprising:	
a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of 1 sheets, as follows:	
<input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).	
<input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.	
b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4. This report contains indications relating to the following items:	
<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 8 June 2005	Date of completion of the report 10 October 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  <b>D.R. LUM</b> Telephone No. (02) 6283 2544

**Box No. I Basis of the report**

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☒ This report is based on translations from the original language into the following language  
which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-8 as originally filed/furnished

pages\* received by this Authority on with the letter of

pages\* received by this Authority on with the letter of

☒ the claims:

pages as originally filed/furnished

pages\* as amended (together with any statement) under Article 19

pages\* 9 received by this Authority on 8 June 2005 with the letter of 8 June 2005

pages\* received by this Authority on with the letter of

☒ the drawings:

pages 1/2 - 2/2 as originally filed/furnished

pages\* received by this Authority on with the letter of

pages\* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001518

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims 1-10	YES
	Claims	NO
Inventive step (IS)	Claims 1-10	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-10	YES
	Claims	NO

## 2. Citations and explanations (Rule 70.7)

Claims 1-10 meet the criteria set forth in PCT Article 33(2) - (4) for novelty, inventive step and industrial applicability. The prior art, either individually or in obvious combination, published before the priority date does not disclose the features of the only independent claim 1

**CLAIMS:**

1. An emissions control device for an engine having a fuel system, the device including
  - (a) an elongate body portion having a plurality of channels which are angularly orientated to each other in a Y-shaped configuration, the Y-shaped configuration located in association with a fuel conduit or rail and
  - (b) each channel having at least one magnet positioned in the channel, the at least one magnet having a polar axis orientated to create magnetic fields directed at a common site adjacent to the body portion and within at least a part of the fuel conduit or rail.
2. An emissions control device as claimed in claim 1 wherein the open faces are radially spaced at approximately 120 degrees.
3. An emissions control device as claimed in claim 1 or claim 2 including a tubular cover which houses the body and provides an opening common with the common site.
4. An emissions control device according to claim 3 wherein the opening is an elongate opening defined between a pair of channels of the Y-shaped configuration.
5. An emissions control device as claimed in any one of claims 1 to 3 wherein the magnet is mounted in a first of the channels are neodymium magnets.
6. An emissions device as claimed in any one of claims 1 to 3 wherein the magnets mounted in a second and third channels are ferrite magnets.
7. An emissions control device as claimed in claim 3 wherein the fuel conduit or rail of the fuel system is at least partially received in the opening.
8. A method of treating air fuel mixtures of an engine having a fuel injection system comprising mounting a device as claimed in any one of claims 1 to 7 in association with a fuel intake rail of a fuel injection system.
9. A method as claimed in claim 8 wherein the device is mounted externally of the fuel rail.
10. A method as claimed in claim 8 wherein the device is mounted within the fuel rail.